

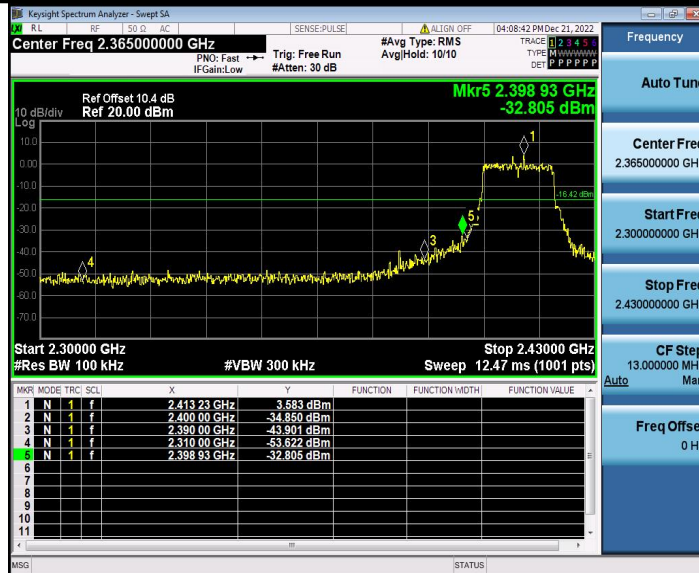


Test Graphs:





Test report No.: RZBG(W)20221128001-1



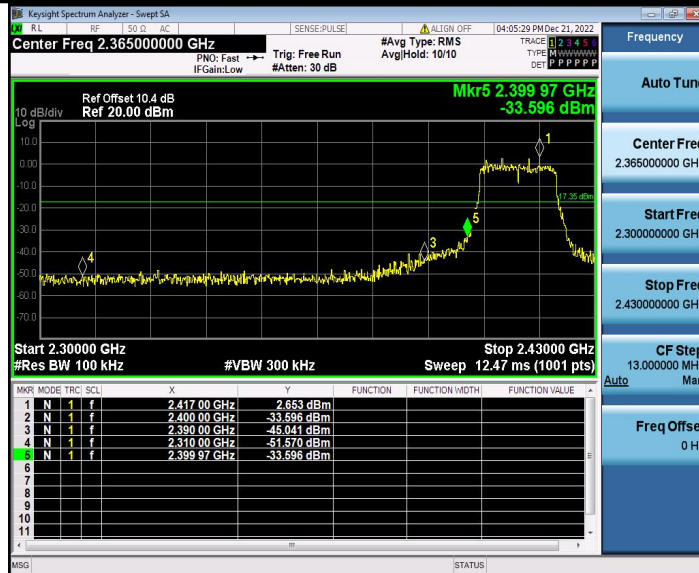
11G Ant1_High_2462



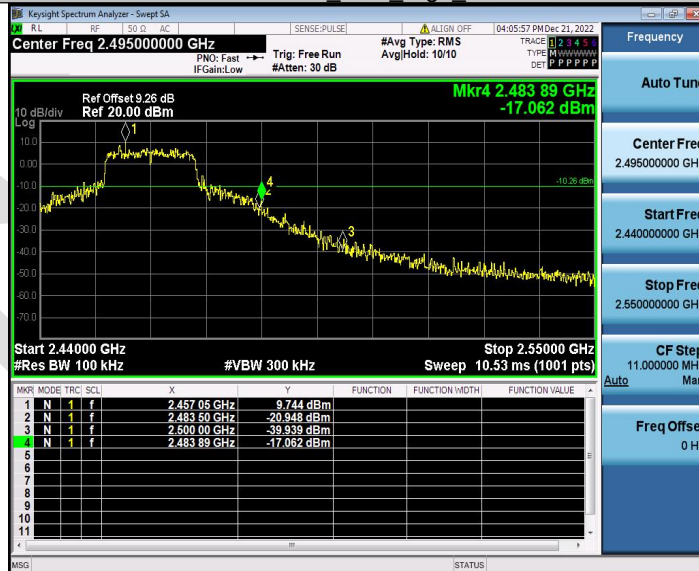
11N20SISO_Ant1_Low_2412



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11N20SISO_Ant1_High_2462



11N40SISO_Ant1_Low_2422



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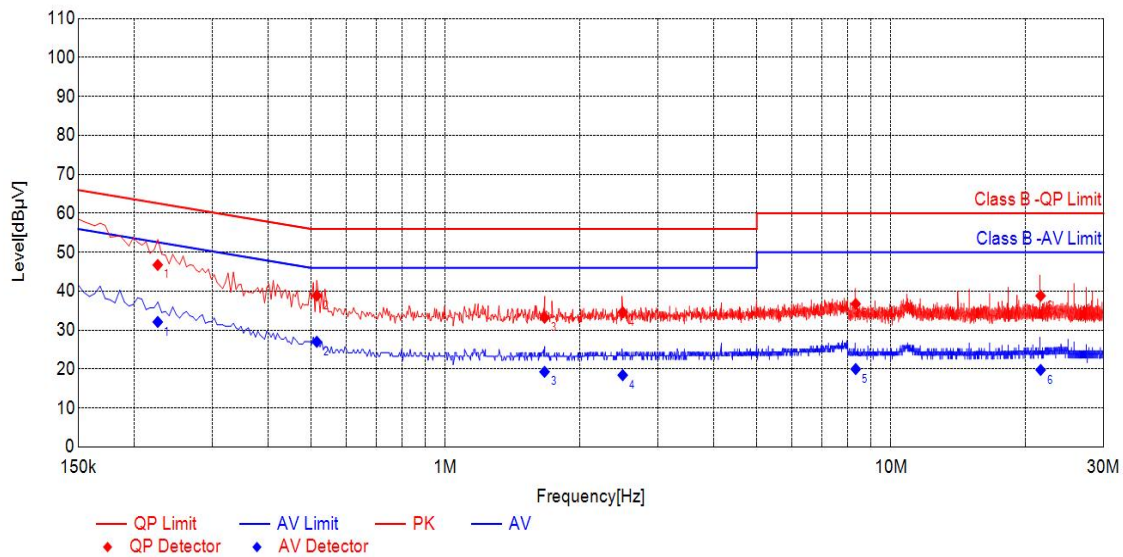


A.5 AC Power Line Conducted Emission

Note 1: The EUT is working in the Normal link mode.

Test Data and Plots:

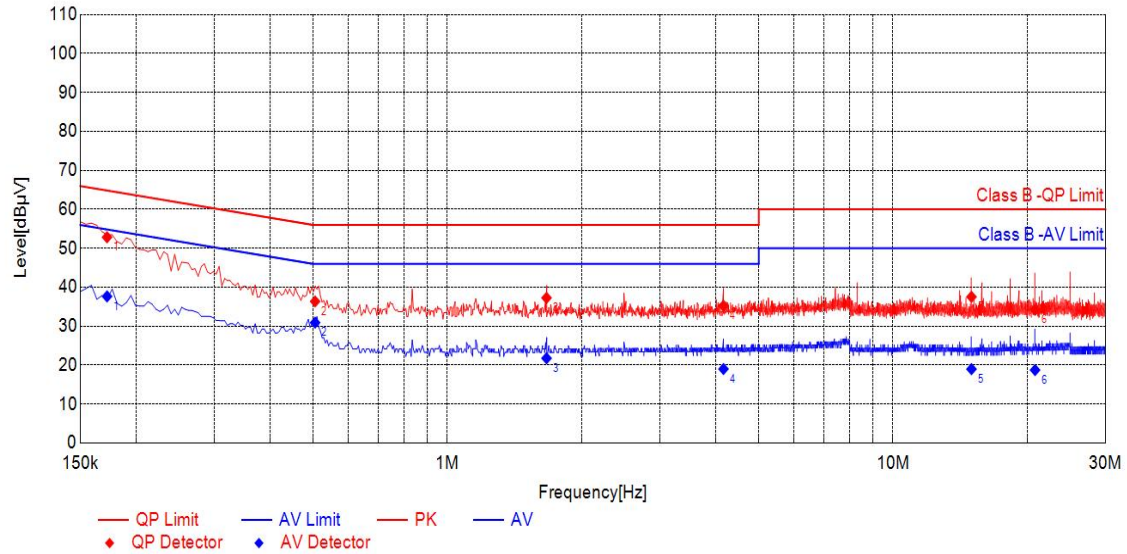
PHASE L



NO.	Freq. [MHz]	QP Reading [dBμV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Result	Type
1	0.2263	27.02	46.76	62.58	15.82	12.39	32.13	52.58	20.45	PASS	L
2	0.5148	19.15	38.88	56.00	17.12	7.30	27.03	46.00	18.97	PASS	L
3	1.6697	13.42	33.20	56.00	22.80	-0.46	19.32	46.00	26.68	PASS	L
4	2.5001	14.69	34.63	56.00	21.37	-1.48	18.46	46.00	27.54	PASS	L
5	8.3328	16.71	36.74	60.00	23.26	0.01	20.04	50.00	29.96	PASS	L
6	21.6639	18.57	38.84	60.00	21.16	-0.46	19.81	50.00	30.19	PASS	L



PHASE N



NO.	Freq. [MHz]	QP Reading [dBμV]	QP Value [dBμV]	QP Limit [dBμV]	QP Margin [dB]	AV Reading [dBμV]	AV Value [dBμV]	AV Limit [dBμV]	AV Margin [dB]	Result	Type
1	0.1724	33.03	52.85	64.84	11.99	17.84	37.66	54.84	17.18	PASS	N
2	0.5050	16.65	36.37	56.00	19.63	11.21	30.93	46.00	15.07	PASS	N
3	1.6694	17.54	37.28	56.00	18.72	2.04	21.78	46.00	24.22	PASS	N
4	4.1652	15.26	35.24	56.00	20.76	-0.96	19.02	46.00	26.98	PASS	N
5	14.9984	17.60	37.55	60.00	22.45	-0.96	18.99	50.00	31.01	PASS	N
6	20.8360	13.99	34.23	60.00	25.77	-1.48	18.76	50.00	31.24	PASS	N



A.6 Radiated Emission

Note 1: The symbol of “--” in the table which means not application.

Note 2: For the test data above 1 GHz, According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

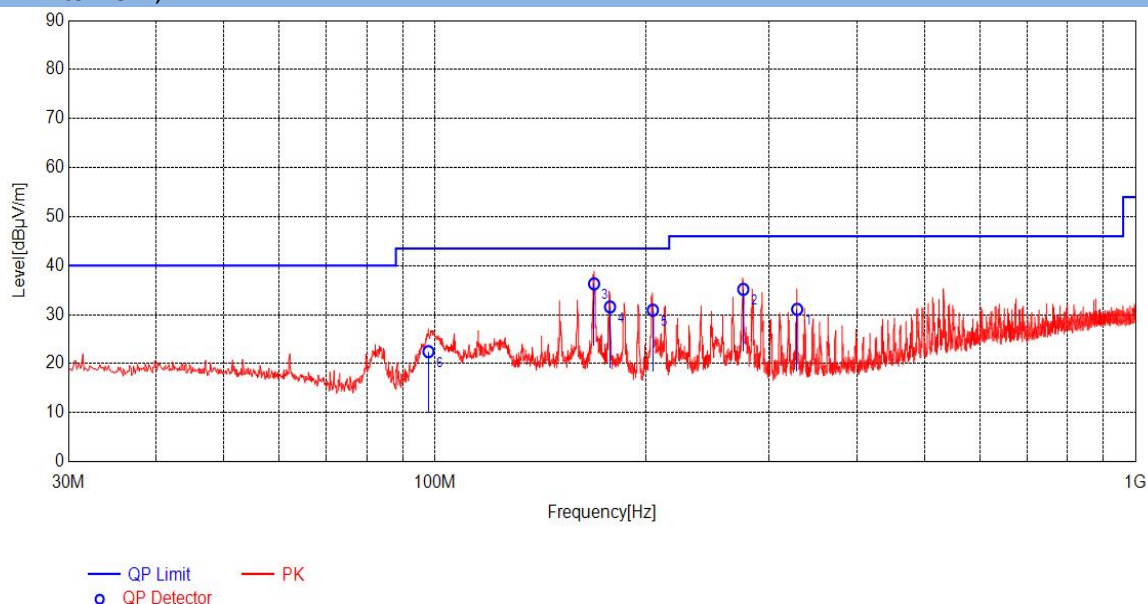
Note 3: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Note 4: The EUT is working in the Normal link mode below 1 GHz.

Note 5: The emission in 18GHz-25GHz only show the worst test data, because of they are noisy.

Test Data and Plots:

30 MHz to 1 GHz, ANT H

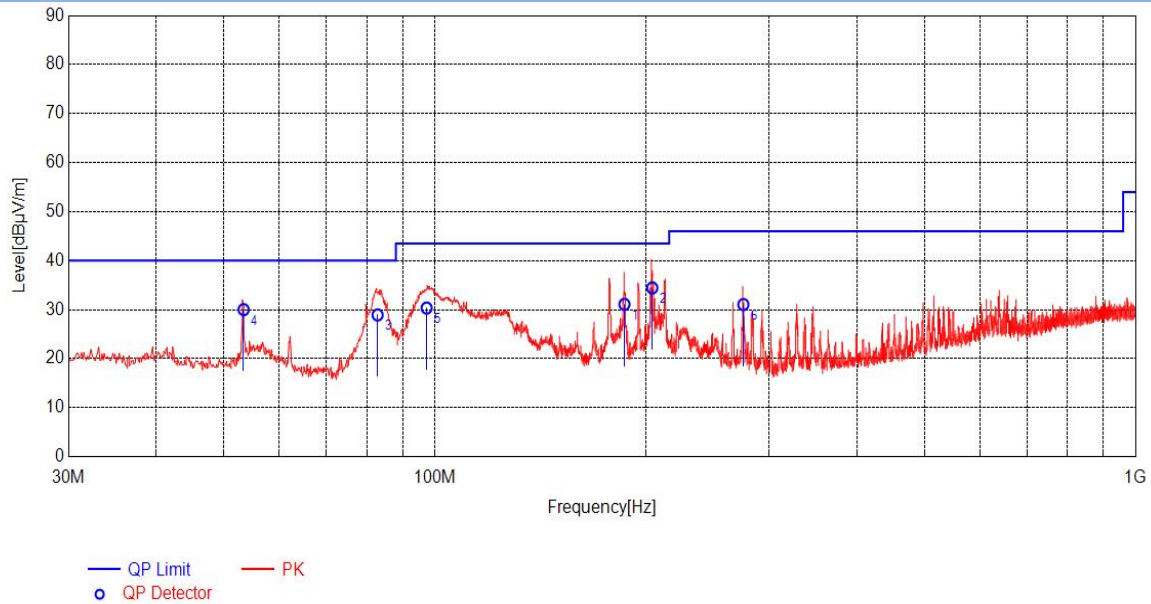


Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	328.9032	15.03	31.11	46.00	14.89	102.8	83.4	Horizontal
2	275.5499	13.93	35.18	46.00	10.82	108	93.3	Horizontal
3	168.7378	15.10	36.31	43.50	7.19	209.2	187.5	Horizontal
4	177.8359	13.74	31.59	43.50	11.91	220.4	191.2	Horizontal
5	204.6978	12.28	30.94	43.50	12.56	124.5	299.9	Horizontal
6	97.9364	11.68	22.47	43.50	21.03	190.1	11.1	Horizontal



30 MHz to 1 GHz, ANT V



Final Data List

NO.	Freq. [MHz]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	186.4409	12.79	31.10	43.50	12.40	108.1	27.6	Vertical
2	204.2812	12.27	34.46	43.50	9.04	102.1	29.4	Vertical
3	82.8501	10.76	28.94	40.00	11.06	101.4	81	Vertical
4	53.3505	14.83	30.02	40.00	9.98	108	72.7	Vertical
5	97.3269	11.60	30.35	43.50	13.15	114.4	202.7	Vertical
6	275.5692	13.93	31.07	46.00	14.93	106.5	352	Vertical



above 1GHz(1GHz-18GHz):

802.11b CH1, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4823.30	-4.10	55.95	51.84	74.00	22.16	Peak
2	7924.10	6.69	38.17	44.86	74.00	29.14	Peak

802.11b CH1, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4823.30	-4.10	57.63	53.53	74.00	20.47	Peak
2	7930.90	6.73	38.66	45.39	74.00	28.61	Peak

802.11b CH6, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4874.30	-3.78	54.48	50.71	74.00	23.29	Peak
2	9748.20	8.99	38.40	47.38	74.00	26.62	Peak

802.11b CH6, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4872.60	-3.79	52.74	48.95	74.00	25.05	Peak
2	7308.70	4.84	39.76	44.60	74.00	29.40	Peak

802.11b CH11, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4923.60	-3.40	55.62	52.22	74.00	21.78	Peak
2	7386.90	5.18	39.86	45.04	74.00	28.96	Peak

802.11b CH11, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4923.60	-3.40	52.64	49.24	74.00	24.76	Peak
2	7381.80	5.13	40.39	45.52	74.00	28.48	Peak

802.11G CH1, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4825.00	-4.10	49.89	45.79	74.00	28.21	Peak
2	7222.00	4.25	40.74	44.99	74.00	29.01	Peak



802.11G CH1, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4818.20	-4.13	53.04	48.92	74.00	25.08	Peak
2	7237.30	4.24	40.18	44.42	74.00	29.58	Peak

802.11G CH6, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4874.30	-3.78	49.75	45.97	74.00	28.03	Peak
2	7414.10	5.32	39.06	44.38	74.00	29.62	Peak

802.11G CH6, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4870.90	-3.80	49.61	45.81	74.00	28.19	Peak
2	7307.00	4.84	41.45	46.29	74.00	27.71	Peak

802.11G CH11, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4923.60	-3.40	52.72	49.32	74.00	24.68	Peak
2	7386.90	5.18	41.44	46.62	74.00	27.38	Peak

802.11G CH11, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4923.60	-3.40	53.40	50.00	74.00	24.00	Peak
2	7386.90	5.18	39.78	44.96	74.00	29.04	Peak

802.11N20 CH1, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4825.00	-4.10	47.00	42.90	74.00	31.10	Peak
2	7232.20	4.24	39.25	43.49	74.00	30.51	Peak

802.11N20 CH1, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4819.90	-4.12	50.00	45.88	74.00	28.12	Peak
2	7239.00	4.24	39.63	43.86	74.00	30.14	Peak



802.11N20 CH6, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4870.90	-3.80	49.05	45.24	74.00	28.76	Peak
2	7375.00	5.06	39.02	44.08	74.00	29.92	Peak

802.11N20 CH6, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4872.60	-3.79	50.83	47.04	74.00	26.96	Peak
2	7939.40	6.78	39.04	45.82	74.00	28.18	Peak

802.11N20 CH11, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4928.70	-3.37	51.82	48.45	74.00	25.55	Peak
2	7386.90	5.18	39.40	44.58	74.00	29.42	Peak

802.11N20 CH11, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4927.00	-3.38	52.83	49.45	74.00	24.55	Peak
2	7384.73	7.57	44.23	51.80	74.00	22.20	Peak

802.11N40 CH3, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4852.20	-3.96	48.63	44.67	74.00	29.33	Peak
2	7347.80	4.80	38.34	43.15	74.00	30.85	Peak

802.11N40 CH3, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4838.60	-4.03	49.45	45.42	74.00	28.58	Peak
2	7548.40	5.68	39.44	45.11	74.00	28.89	Peak

802.11N40 CH6, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4874.30	-3.78	50.68	46.90	74.00	27.10	Peak
2	7312.10	4.84	39.67	44.51	74.00	29.49	Peak



802.11N40 CH6, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4865.80	-3.85	51.71	47.86	74.00	26.14	Peak
2	7310.40	4.84	39.51	44.35	74.00	29.65	Peak

802.11N40 CH9, ANT V

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4906.60	-3.51	49.87	46.36	74.00	27.64	Peak
2	7358.00	4.88	40.79	45.67	74.00	28.33	Peak

802.11N40 CH9, ANT H

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	4906.60	-3.51	51.49	47.98	74.00	26.02	Peak
2	7341.00	4.81	40.92	45.73	74.00	28.27	Peak



802.11g CH6, ANT V(18GHz-25GHz)

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	21411.91	-18.05	61.22	43.16	74.00	30.84	Peak
2	22408.99	-18.00	60.87	42.87	74.00	31.13	Peak

802.11g CH6, ANT H(18GHz-25GHz)

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	21416.19	-18.03	61.01	42.98	74.00	31.02	Peak
2	22462.74	-18.20	61.31	43.12	74.00	30.88	Peak



A.7 Band Edge (Restricted band-edge)

Test Result

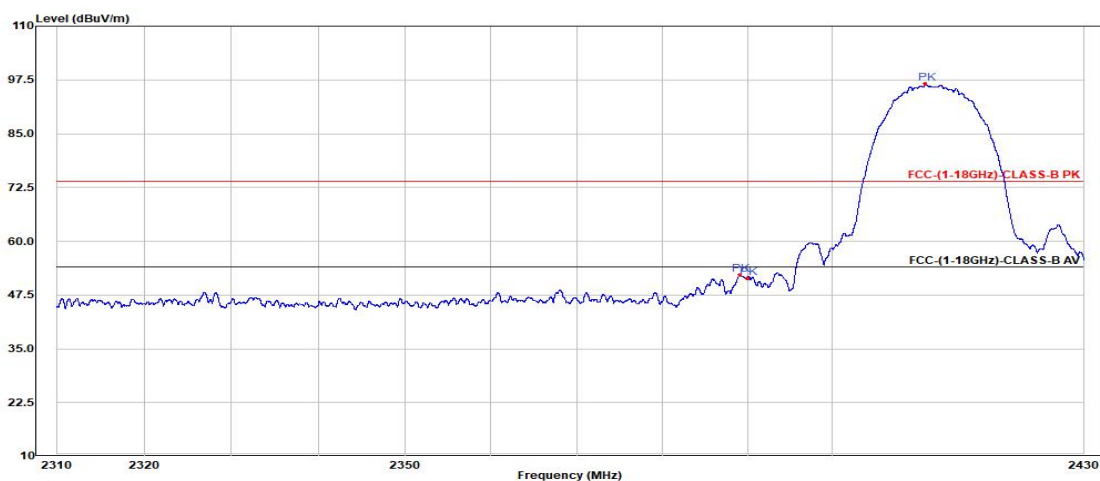
Note:

1. The lowest and highest channels are tested to verify the band edge emissions. Please refer to the following the plots for emissions values.
2. The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.
3. According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement



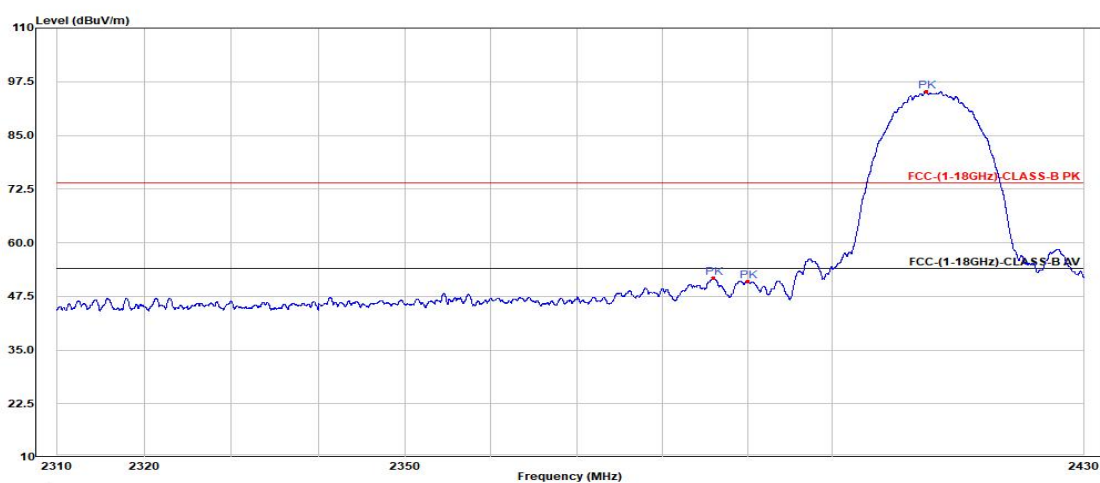
Test Graphs:

11B-2412-H



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2389.12	33.98	18.23	52.21	74.00	21.79	Peak
2	2390.00	33.98	17.54	51.53	74.00	22.47	Peak
3	2411.09	33.99	62.58	96.57	74.00	N/A	Peak

11B-2412-V

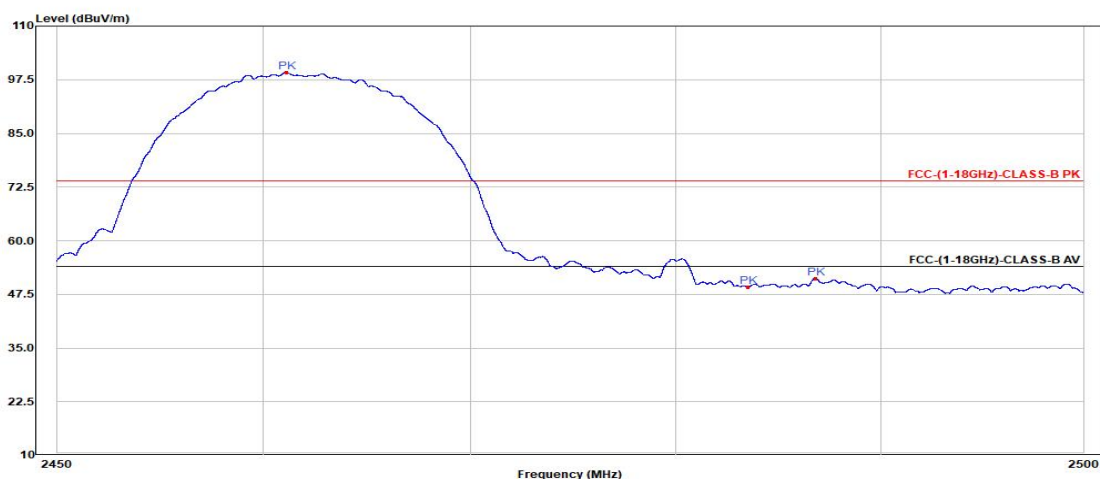


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2385.96	33.97	17.86	51.83	74.00	22.17	Peak
2	2390.00	33.98	17.01	50.99	74.00	23.01	Peak
3	2411.10	33.99	61.26	95.25	74.00	N/A	Peak

11B-2462-H

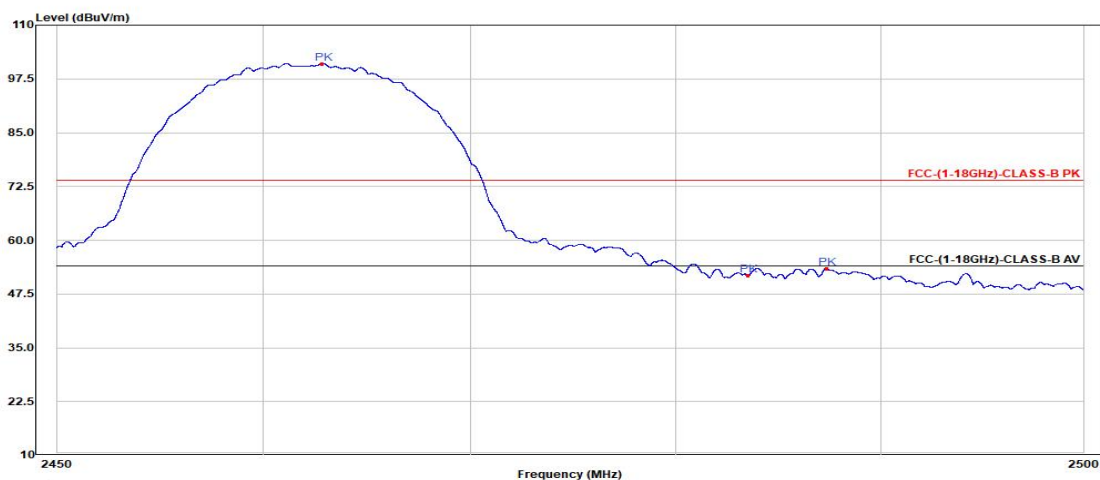


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No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2461.10	34.20	65.02	99.22	74.00	N/A	Peak
2	2483.50	34.27	15.06	49.33	74.00	24.67	Peak
3	2486.83	34.29	16.92	51.21	74.00	22.79	Peak

11B-2462-V

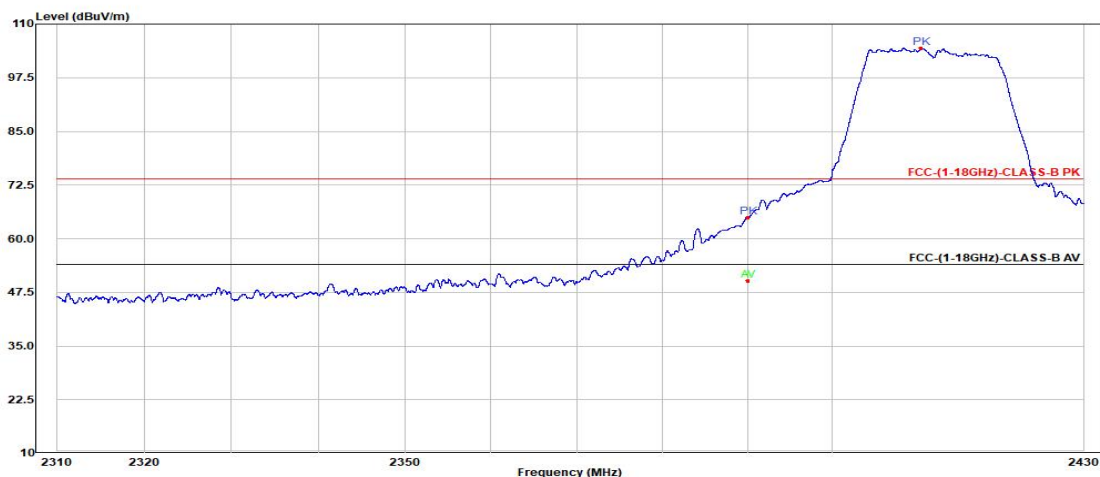


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2462.85	34.20	66.89	101.09	74.00	N/A	Peak
2	2483.50	34.27	17.66	51.93	74.00	22.07	Peak
3	2487.37	34.29	19.13	53.42	74.00	20.58	Peak

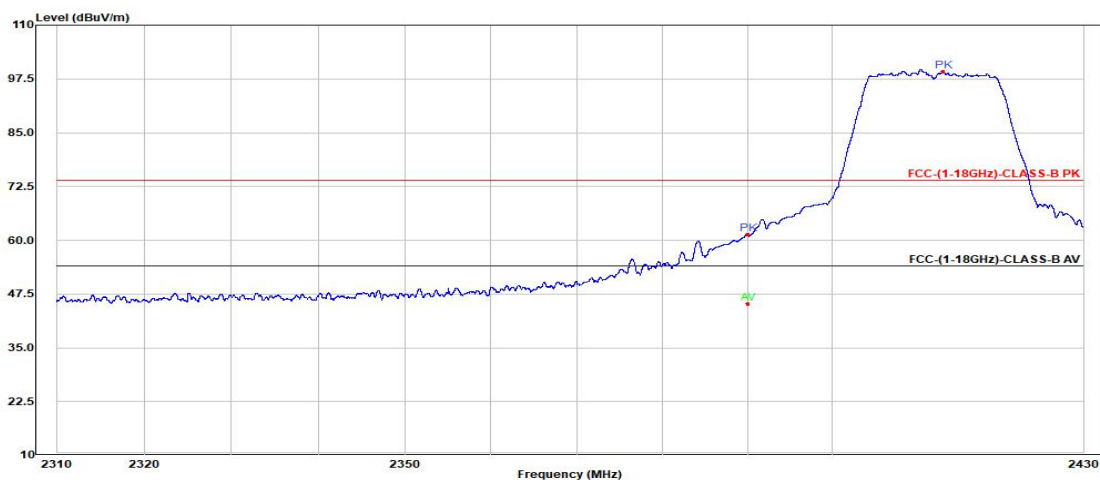
11G-2412-H



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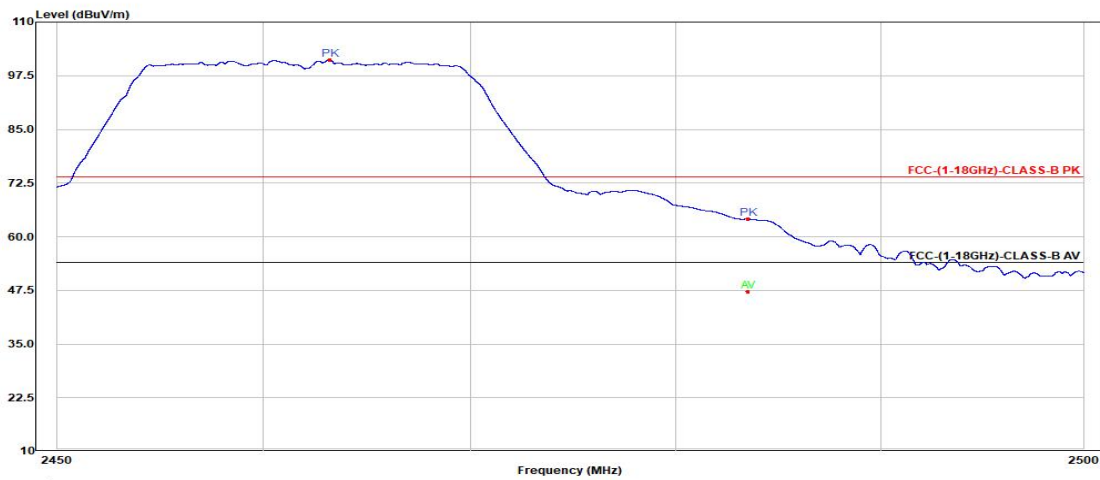
11G-2412-V



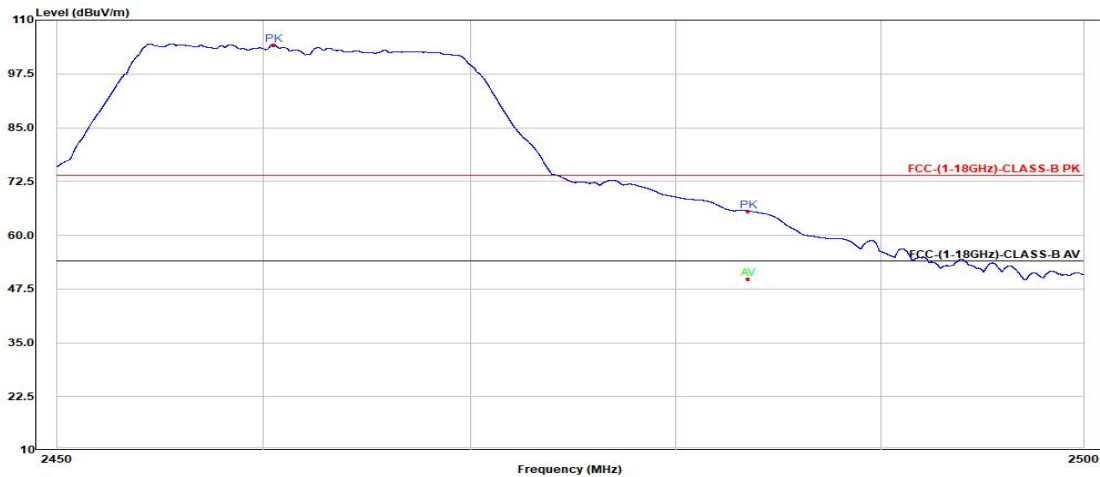
11G-2462-H



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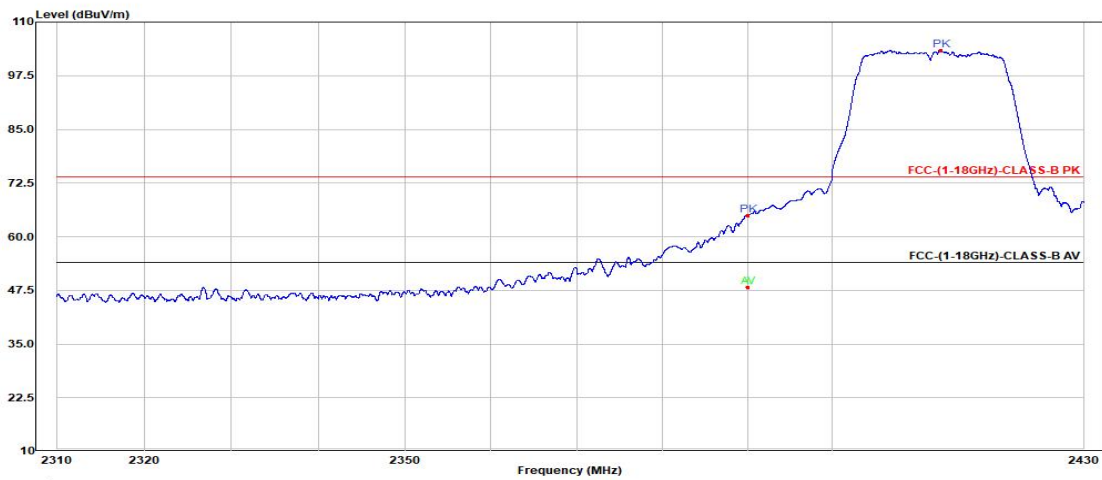
11G-2462-V



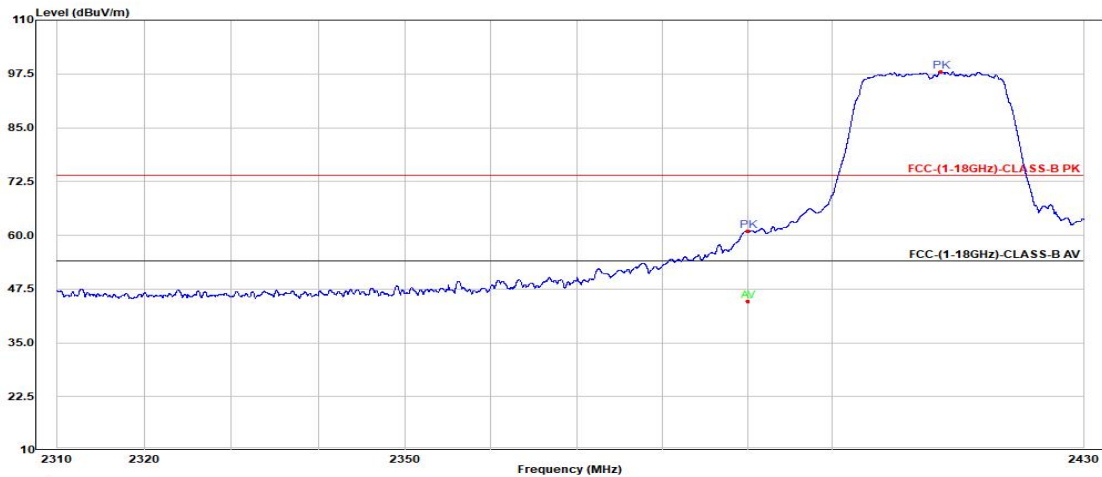
11N20-2412-H



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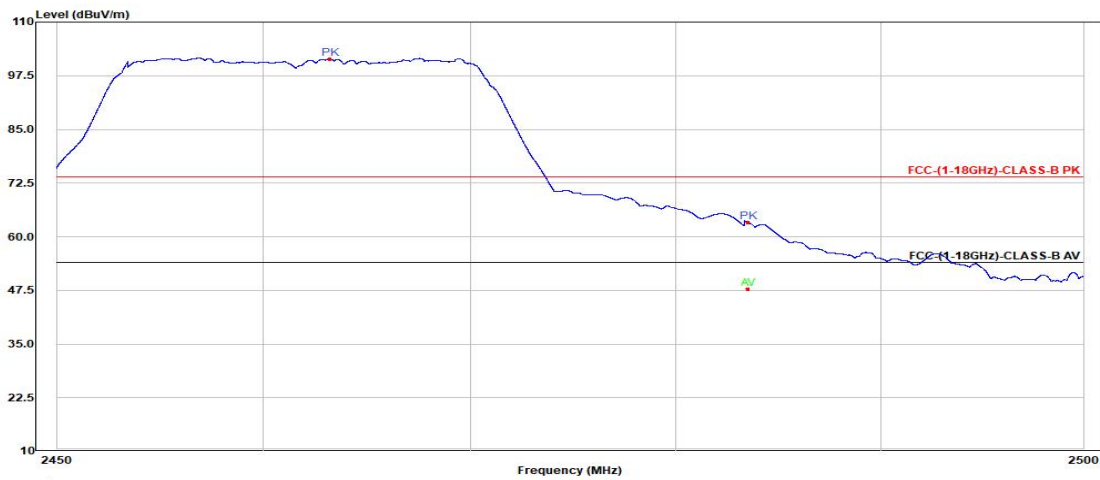
11N20-2412-V



11N20-2462-H

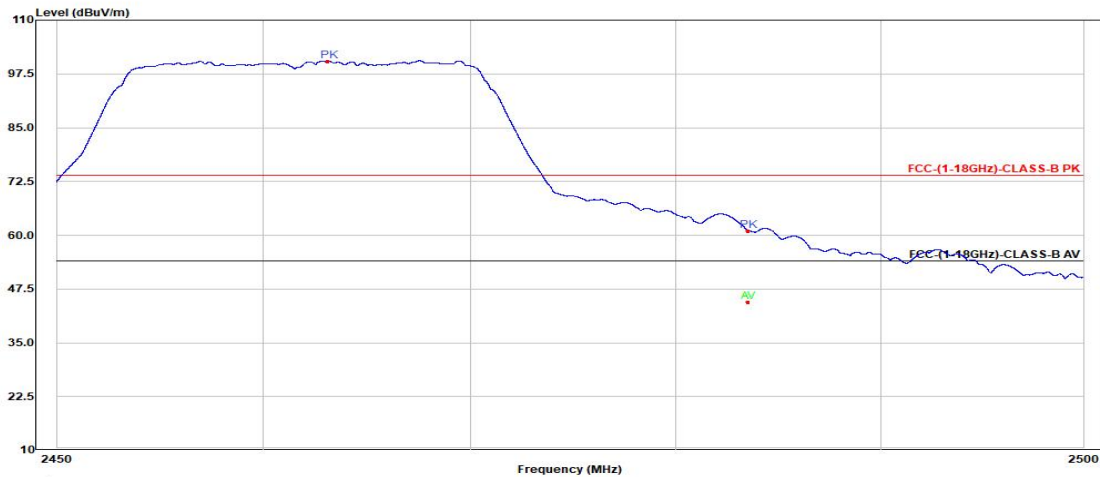


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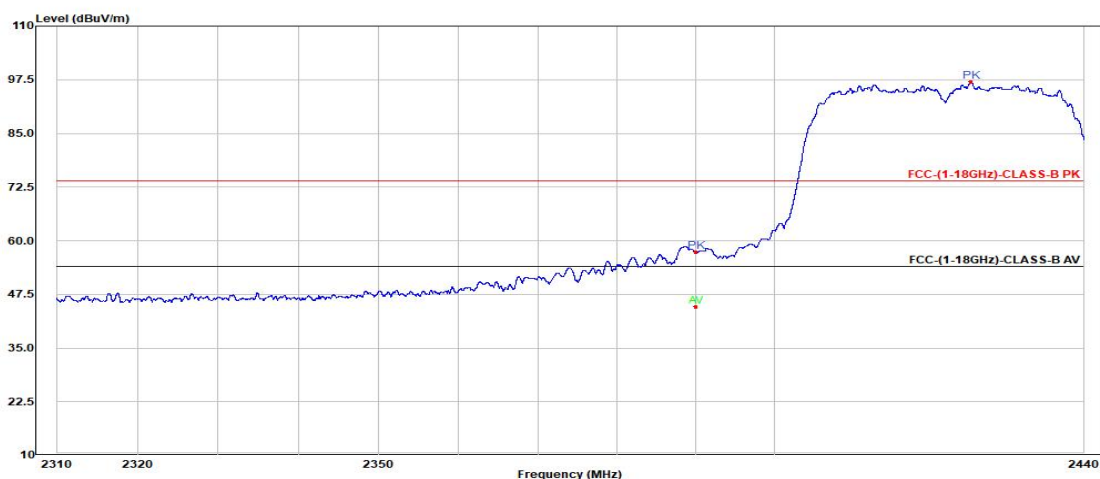
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2463.18	34.20	67.21	101.41	74.00	N/A	Peak
2	2483.50	34.27	29.19	63.46	74.00	10.54	Peak
3	2483.50	34.27	13.62	47.89	54.00	6.11	Average

11N20-2462-V



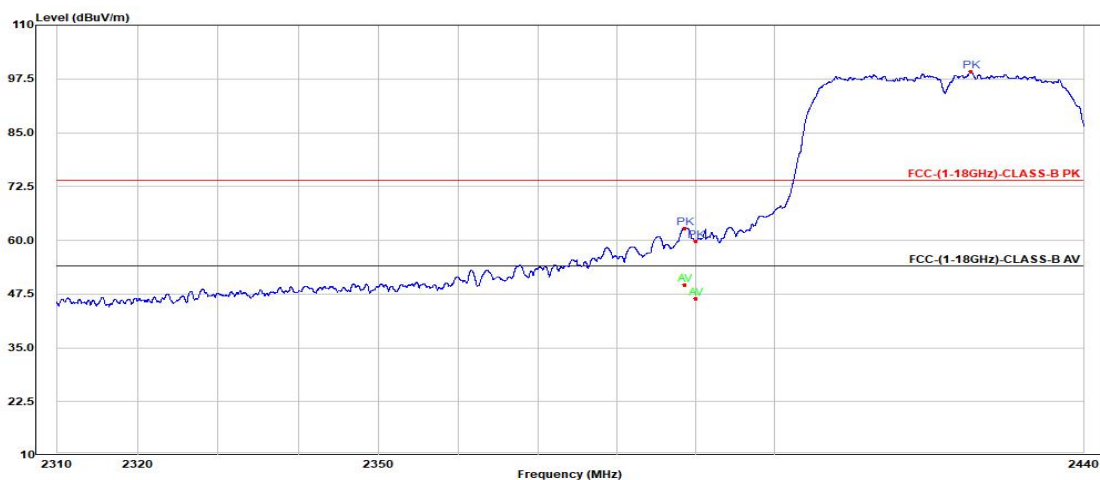
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2463.12	34.20	66.33	100.52	74.00	N/A	Peak
2	2483.50	34.27	26.82	61.09	74.00	12.91	Peak
3	2483.50	34.27	10.20	44.47	54.00	9.53	Average

11N40-2422-H



Trace:							
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2390.00	33.98	23.42	57.40	74.00	16.60	Peak
2	2390.00	33.98	10.69	44.67	54.00	9.33	Average
3	2425.31	33.99	63.00	96.99	74.00	N/A	Peak

11N40-2422-V

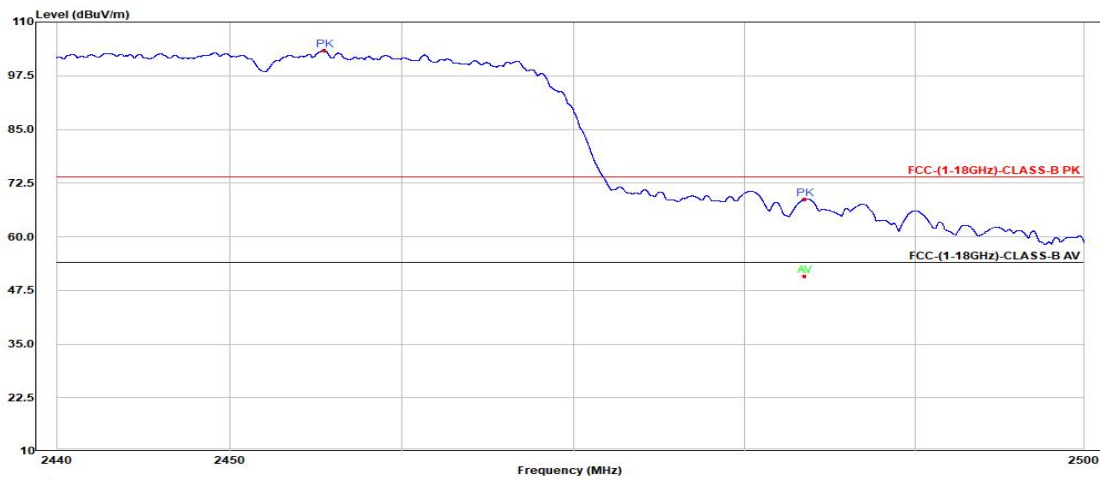


Trace:							
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2388.61	33.98	28.90	62.88	74.00	11.12	Peak
2	2388.61	33.98	15.65	49.63	54.00	4.37	Average
3	2390.00	33.98	25.81	59.79	74.00	14.21	Peak
4	2390.00	33.98	12.38	46.36	54.00	7.64	Average
5	2425.32	33.99	65.22	99.21	74.00	N/A	Peak

11N40-2452-H

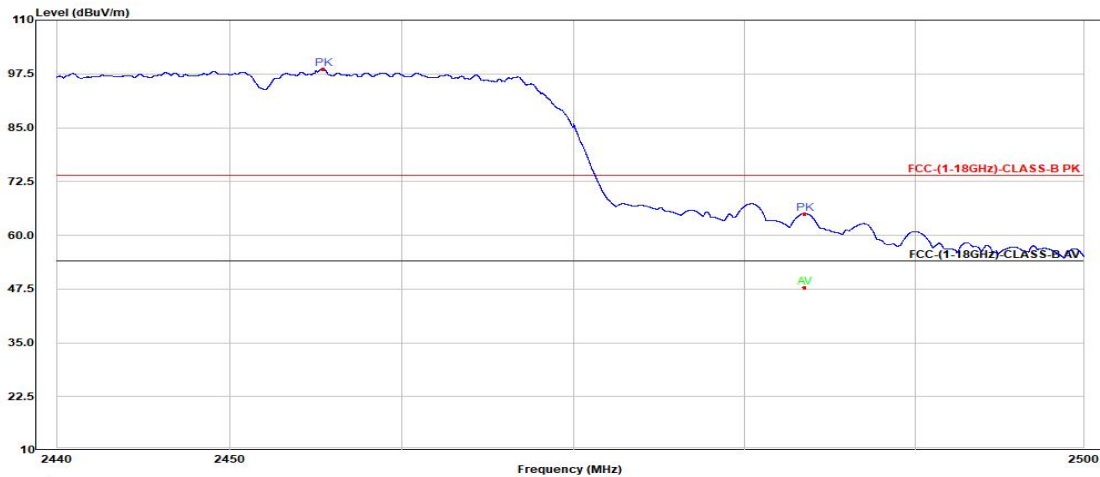


Test report No.: RZBG(W)20221128001-1



Trace:							
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2455.47	34.20	69.30	103.50	74.00	N/A	Peak
2	2483.50	34.27	34.42	68.69	74.00	5.31	Peak
3	2483.50	34.27	16.65	50.92	54.00	3.08	Average

11N40-2452-V



Trace:							
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	2455.40	34.20	64.45	98.65	74.00	N/A	Peak
2	2483.50	34.27	30.77	65.04	74.00	8.96	Peak
3	2483.50	34.27	13.65	47.92	54.00	6.08	Average



A.8 Power Spectral Density

Test Result:

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-4.99	<=8	PASS
		2437	-4.66	<=8	PASS
		2462	-6.1	<=8	PASS
11G	Ant1	2412	-7.57	<=8	PASS
		2437	-7.3	<=8	PASS
		2462	-9.03	<=8	PASS
11N20SISO	Ant1	2412	-8.3	<=8	PASS
		2437	-7.92	<=8	PASS
		2462	-9.69	<=8	PASS
11N40SISO	Ant1	2422	-9.4	<=8	PASS
		2437	-9.87	<=8	PASS
		2452	-10.98	<=8	PASS



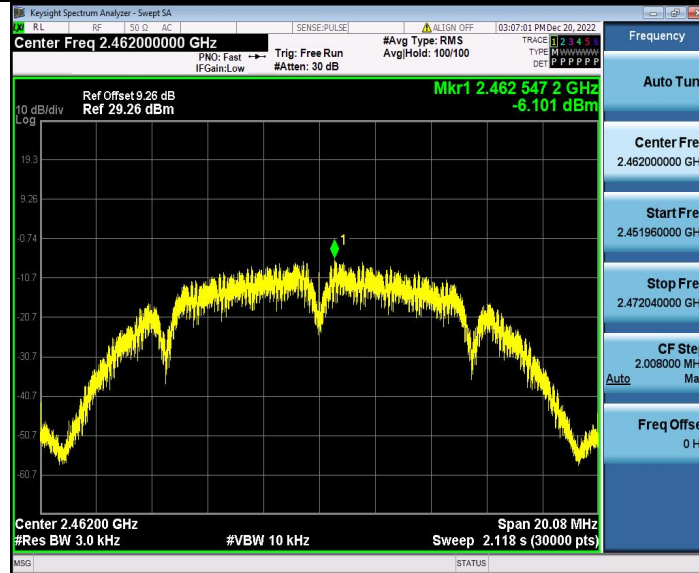
Test Graphs



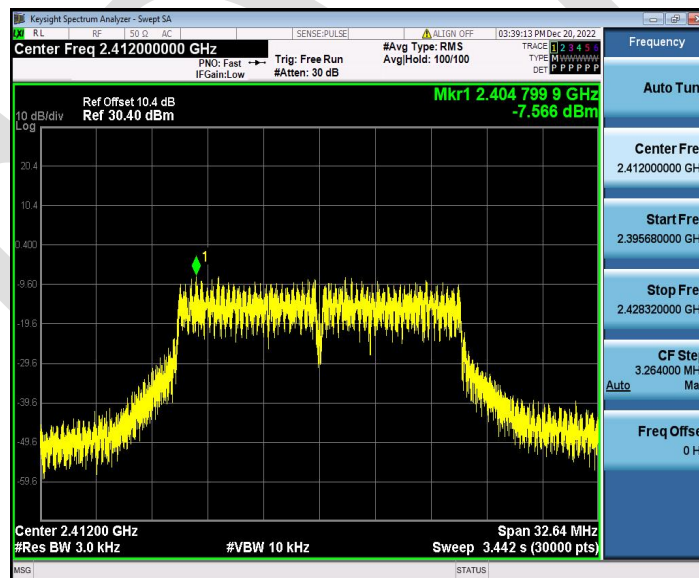
11B 2412



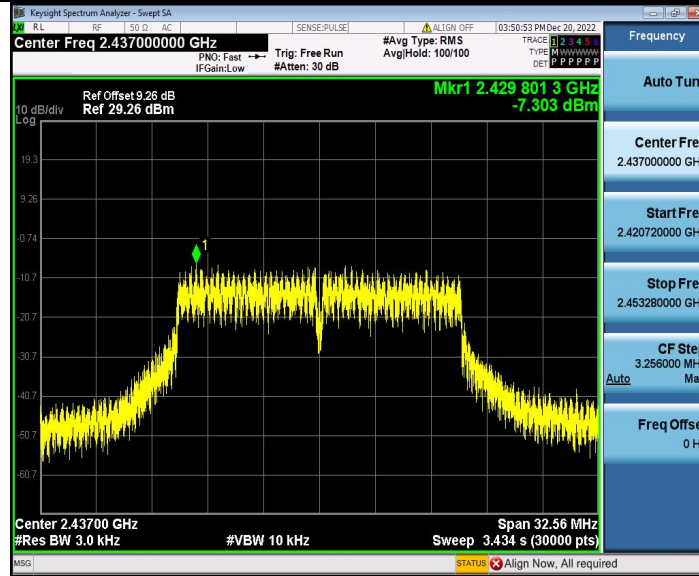
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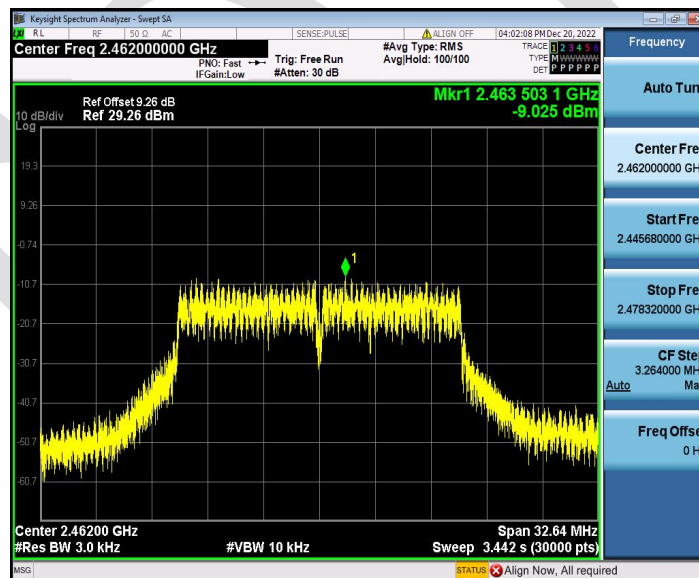
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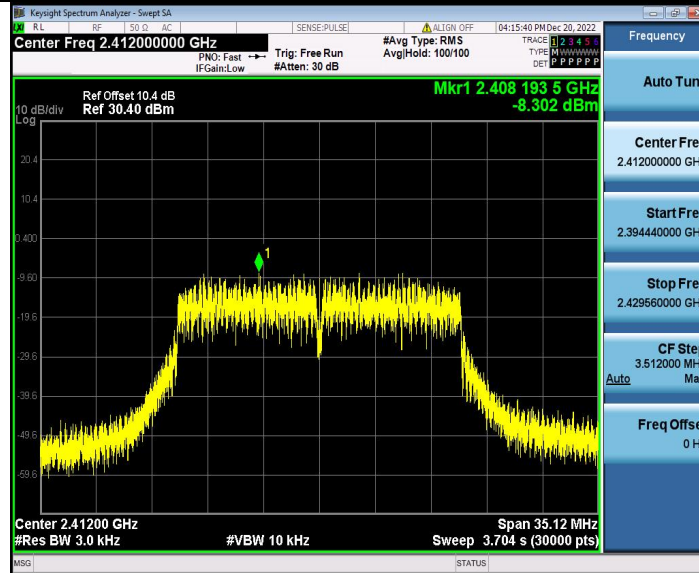
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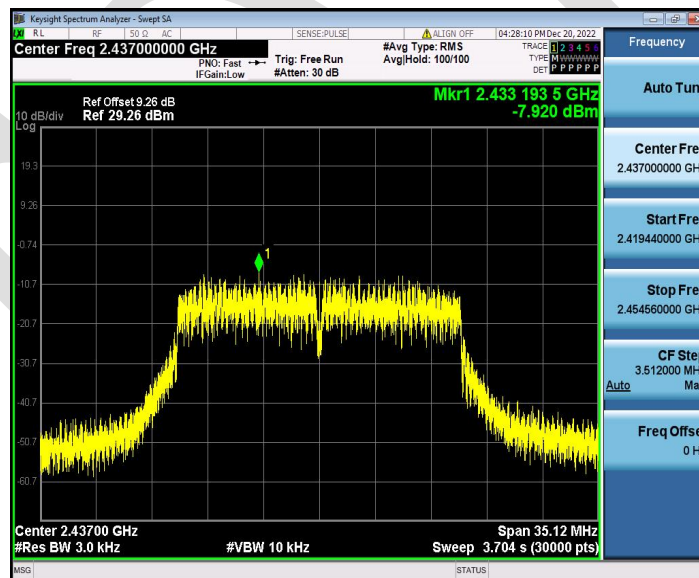
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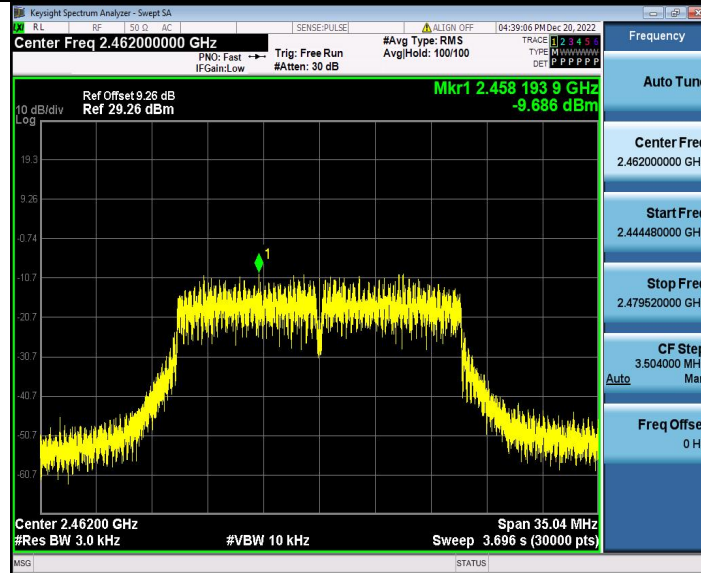
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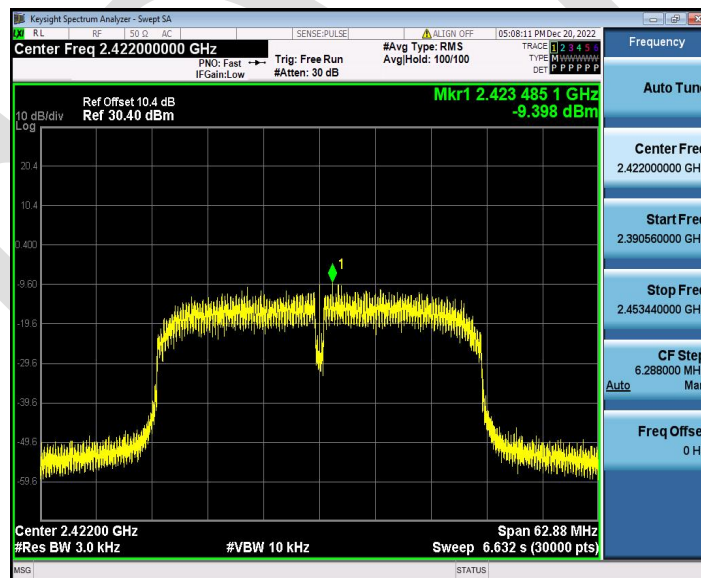
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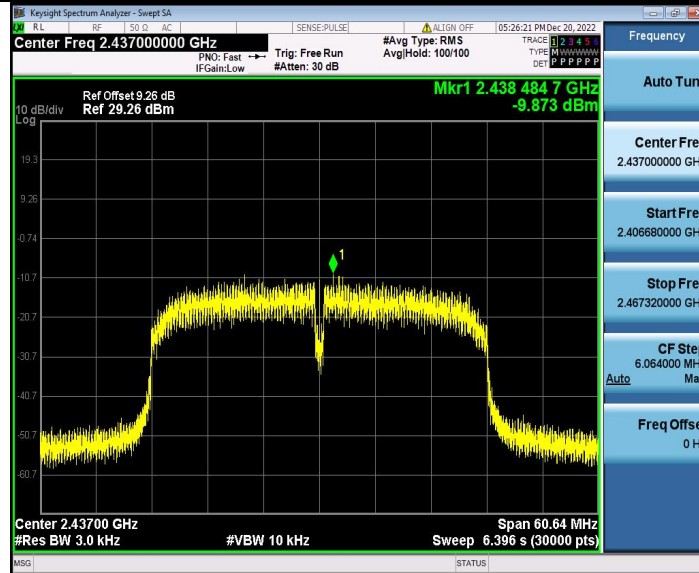
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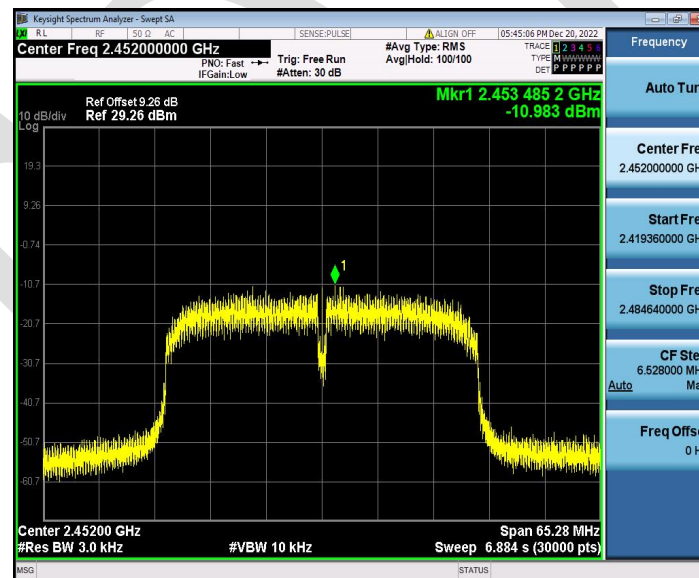
11N20 2462



11N40 2422



11N40 2437



11N40 2452



Annex B Test Setup Photograph

Please refer the document “RZBG(W)20221128001-2 RF Test Setup Photos”pdf

Annex C EUT Internal Photograph

Please refer the document “RZBG(W) 20221128001-3 EUT Internal Photos”pdf

Annex D EUT External Photograph

Please refer the document “RZBG(W) 20221128001-6 EUT External Photos”pdf



Annex E Revision History

Version	Issue Date	Revisions Content
Rev.01	Dec.30.2022	Initial Issue

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